On the resonance excitation of waves ...

S/057/63/033/001/c13/017 B125/B186

Fig. 1 shows the disturbance in the t, x plane. The full lines denote the shock waves. For M < 0 the flow through the centered rarefied expansion waves is more complex. The irreversible change of the inner energy at the front of the magnetoacoustic wave in a strong magnetic field yields

 $T \cite{S} = \frac{iH_0}{3\pi^2\rho_0\mu} \sqrt{\frac{2i}{3\pi\mu} (1+\mu)H_{0p}}$ . For  $\mu$  = -1 the next higher approximation is to be considered. For  $\Delta$ 1 to there is no irreversible heating through shock waves. The irreversible heating of the liquid in the shock waves does not depend on the dissipative coefficients. The frequency of maximum dissipation is slightly displaced with respect to the resonance frequency. According to these results a plasma is most conveniently heated by magnetoacoustic waves. There are 3 figures.

ASSOCIATION: Matematicheskiy institut im. V. A. Steklova AN SSSR, Moskva (Mathematical Institute imeni V. A. Steklov AS USSR, Moscow)

SUBMITTED: October 28, 1961

Card 3/4

IORDANSKIY, S.V.; KULIKOVSKIY, A.G.

Stability of higher correlation functions in a plasma. Dokl.
AN SSSR 152 no.4:849-852 0 '63. (MIRA 16:11)

1. Matematicheskiy institut im. V.A. Steklova AN SSSR. Predstavleno akademikom L.I. Sedovym.

## IORDANSKIY, S.V.

Hydrodynamics of a rotating Bose system below the condensation point. Dokl. AN SSSR 153 no.1:74-77 N '63. (MIRA 17:1)

1. Matematicheskiy institut im. V.A. Steklova AN SSSR.
Predstavleno akademikom N.N. Bogolyubovym.

ACCESSION NR: AP4019243

\$/0056/64/046/002/0732/0744

AUTHORS: Iordanskiy, S. V.; Kulikovskiy, A. G.

TITLE: A quasilinear approximation and the correlation functions for a plasma

SOURCE: Zhurnal eksper. i teor. fiz., v. 46, no. 2, 1964, 732-744

TOPIC TAGS: plasma, correlation function, Langmuir plasma wave, plasma instability, higher correlation function, first distribution function, nonlinear interaction, quasilinear approximation

ABSTRACT: A completely ionized spatially-homogeneous plasma without a magnetic field is considered, when the usual expressions for the correlation functions in the plasma are unstable against the occurrence of Langmuir plasma waves. The purpose is to obtain expressions for the second correlation function, since it determines the variation of the first distribution functions. A new method is

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ACCESSION NR: AP4019243

therefore used to solve the equations for the higher correlation functions, based on a simple representation of the corresponding Green's functions. Approximate expressions for the correlation functions, with allowance for nonlinear interactions, are obtained for small instability increments. It is shown that the quasilinear approximation is odd only in the case when the instability is contained in a sufficiently small region of phase velocities of the waves. The necessary condition for the applicability of the equations of the quasilinear approximation for large time intervals is shown to be smallness of the increments and also smallness of the relative velocity increment. "The authors are grateful to N. N. Bogolyubov and Yu. L. Klimontovich for a discussion of questions connected with this work." Orig. art. has: 34 formulas.

ASSOCIATION: Matematicheskiy institut im. V. A. Steklova AN SSSR (Mathematics Institute, AN SSSR)

Card

2/1

IORDANSKIY, S.V.; KULIKOVSKIY, A.G.

Quasi-linear approximation and the correlation functions in a plasma. Zhur. eksp. i teor. fiz. 46 no.2:732-744 F 164.

(MIRA 17:9)

1. Matematicheskiy institut AN SSSR.

ACCESSION NR: AP4042385

8/0056/64/047/001/0167/0174

AUTHOR: Iordanskiy, S. V.

TITLE: Energy spectrum of a Bose gas with weak attraction at large distances

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 1, 1964; 167-174

TOPIC TAGS: Bose Einstein gas, energy level, scattering amplitude, spectral energy distribution, boson

ABSTRACT: In view of the complexity and excessive degree of approximation of earlier methods, the author uses a diagram technique, developed by S. T. Belyayev (ZhETF v. 34, 417 and 433, 1958), to calculate the ground-state energy and the spectrum of elementary excitations for a Bose gas with negative scattering amplitude at low momesta. It is assumed that the potential energy  $V = V_1 + V_2$ , of

the pair interaction of the Bose particles consists of a repelling

1/3

### ACCESSION NR: AP4042385

(radius  $R \gg a$ ), the relation between the effective radii of the two potentials being such that in the essential region we have  $V_1a^3 \sim V_2R^3$ . It is shown that in this case the scattering amplitude of two particles interacting via the potential V can be expressed simply in terms of the scattering amplitude of two particles with potential interaction energy  $V_1$ . The scattering amplitude can be represented by a Born series, obtained by solving an integral equation for the scattering amplitude. In solving this problem, an important role is played by repulsion of small distances, which ensures the possibility of stable states at densities above a certain critical value. The scattering amplitude with zero momenta is assumed small, so that the gas approximation becomes valid near the critical density. The final formulas are similar to those obtained by K. Huang (Phys. Rev. 119, 1129, 1960) but the numerical coeffi-

short-range nucleus (radius a) and an attracting long-range term

# IORDANSKIY, S.V.

Energy spectrum of a Bose gas with weak attraction at large distances. Zhur. eksp. i teor. fiz. 47 no.1:167-174 J1 '64. (MIRA 17:9)

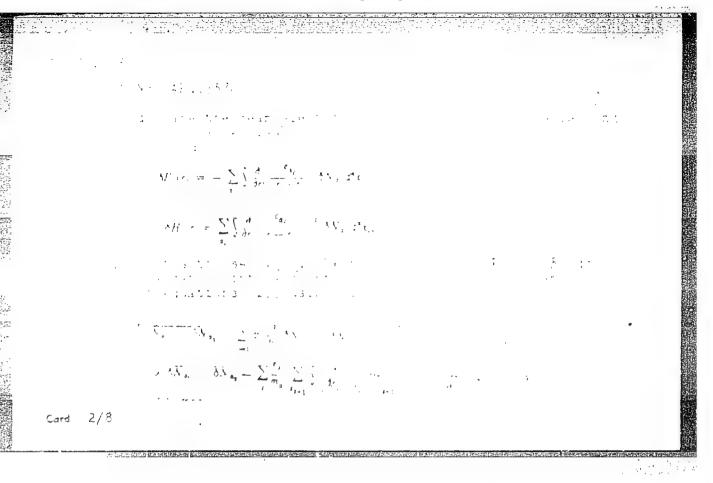
1. Matematicheskiy institut imeni Steklova AN SSSR.

IORDANSKIY, S. V.; KULIKOVSKIY, A. G.

General condition for the stability of higher correlation functions in a plasma. Dokl. AN SSSR 156 no. 1:35-37 My '64. (MIRA 17:5)

1. Predstavleno akademikom L. I. Sedovym.

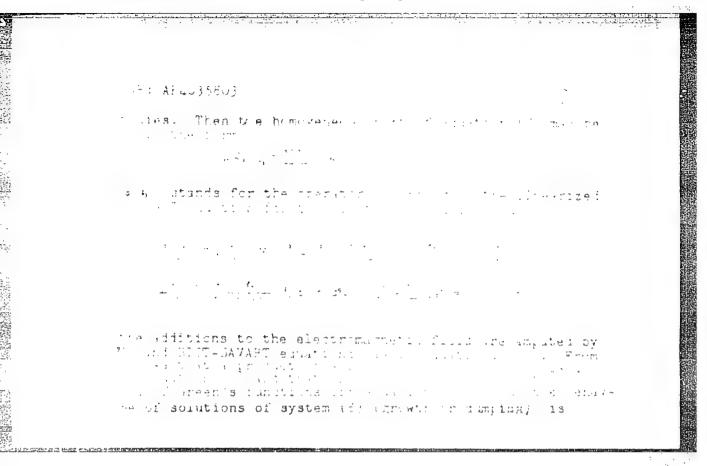
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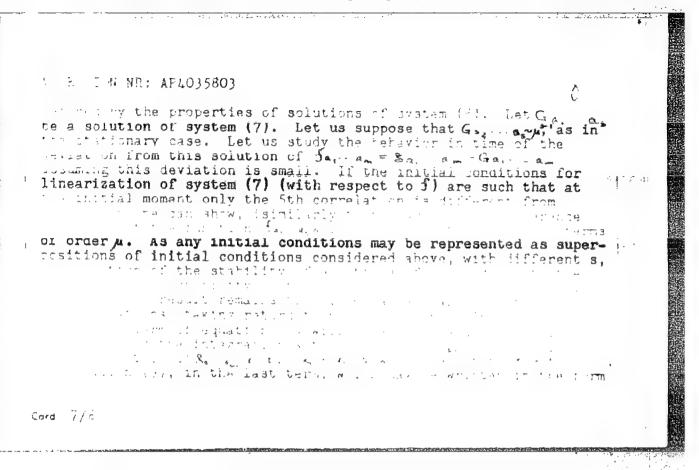


	$. \delta N_{a_{im}} = N_{a_1} \dots N_{a_m} - \sum_{i} N_{a_i} N_{a_i} \dots N_{a_{\ell-1}} N_{a_{\ell+1}} \dots N_{a_{\ell}} + \dots $ (4)	3)
	consider all the arguments x (i=1,,s) to be against terms of against a single from the coincitivelying & functions arising from the coincit	200 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
x <sub>j-j</sub> with	the other arguments, and we have: $\overline{V_{a_1}} = F_{a_1 - a_2} + \sum_{i=1}^{n} \lambda_{a_i a_{i+1}}$	dence : Ozrobersijes Lait
$\mathbf{x}_{j+j}$ with	the other arguments, and we have:	i
$\mathbf{x}_{j+j}$ with	the other arguments, and we have:	i

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$$\frac{\partial t}{\partial s_{i}...s_{i}} \left\{ \frac{1}{c} \sum_{t} \frac{\partial^{2}}{\partial r_{t}} \left\{ \delta_{e_{t}...e_{t}} + \sum_{t} \frac{r_{t}}{m_{e_{t}}} \left( 1 - \frac{\sigma_{t} \rho_{t}}{c^{2}} \right) + \frac{\sigma_{t}}{c} \left( \frac{\sigma_{t}}{c} \frac{\partial}{\partial r_{t}} - \frac{\sigma_{e_{t}}}{c^{2}} \right) \right] \times \\ = \frac{1}{10} \left[ \left( \frac{\partial}{\partial s_{i}...s_{i}} + \sum_{t} \frac{\partial}{\partial r_{t}} \right) \left( \frac{\partial}{\partial r_{t}} - \frac{\sigma_{t}}{r_{t}} \right) - \sum_{t} \frac{\sigma_{t}}{m_{e_{t}}} \sum_{s_{t+1}} \left( \frac{\partial}{\partial r_{t}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right] \times \\ = \frac{1}{10} \left[ \left( \frac{\partial}{\partial s_{i}...s_{i}} + \sum_{s_{t}} \left( \frac{\partial}{\partial r_{t}} - \frac{\sigma_{t}}{r_{t+1}} \right) \right] \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t+1}} \right) \times \\ = \frac{\partial}{\partial \sigma_{t}} \left( \left( \frac{\partial}{\partial s_{i}} - \frac{\sigma_{t+1}}{r_{t$$





the electromagnetic field &E, &H will be computed by exact formulas through for art. has: 9 equations.

# IORDANSKIY, S.V. Symposium on the problem of many bodies. Vest. AN SSSR 34 (MIRA 18 sl)

# "APPROVED FOR RELEASE: Thursday, July 27, 2000

CIA-RDP86-00513R00051872

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AUTHOR:	Iordanskiy, S. V.			25
TITLE:	Vortex ring Formation	in a superfluid liqu	uid /	B .
SOUPCE: 708-714	Zhurnal eksperimental	l'noy i teoretichesko	oy fiziki, v. 48, no.	2, 1965,
TOPIC TA	GS: vortex ring, supe	erfluid, thermal flu	ctuation vortex ring	
f et e	The formation of vormal and superfluid of the ring formation due to the rate of vorte	components is considered to thermal fluctuations formations.	ered. The Fokker-Plax inns is derived and a	ick equation
	$\frac{2\pi kT \sqrt{kT} V}{v_{*}(2\pi A_{f}^{-1}) \sqrt{\pi}}$ $\frac{\rho \rho_{*}}{\rho_{*}^{-1} b^{3} + (1 - 1)}$	$\frac{A}{m} \rho_2 R_{\rm sp}^{1/2} \exp^{-\frac{\pi}{2} (R_{\rm sp})} - \frac{\pi}{2} \frac{B}{\rho_{\rm sp}/\rho_{\rm sp}/\rho_{\rm sp}} = \frac{\partial^2}{\partial [\rho_{\rm sp}/\rho_{\rm sp}]^2 \rho^4} = \frac{\partial^2}{\partial [\rho_{\rm sp}/\rho_{\rm sp}/\rho_{\rm sp}]^2 \rho^4} = \frac{\partial^2}{\partial [\rho_{\rm sp}/\rho_{\rm $	TO THE STATE OF TH	! !

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Taking

$$S_{L} = 2R \frac{\sqrt{2mkT}}{\hbar} \left( \ln \frac{1,046\hbar}{\pi \sqrt{2mkT}} \right)^{-2h} \Gamma\left(\frac{3}{2}\right) \zeta\left(\frac{3}{2}\right).$$

$$R_{\rm top} = \frac{A}{2m\nu_{\bullet}} \left[ \ln \frac{8R_{\rm sop}}{a} - \frac{2}{4} \right] - \frac{kT}{\hbar} \sqrt{2mkT} \left( \ln \frac{1,046\hbar}{a\sqrt{2mkT}} \right)^{-1/4} \frac{4.4m}{4\pi^{2}\rho_{\bullet}\nu_{\bullet}\hbar}.$$

into account, this formula permits the calculation of the number of vortex rings of supercritical radius formed per unit time in volume V. The inverse value determines the relaxation time to the equilibrium state with  $v_{\rm S}=v_{\rm R}$ . A pronounced rate of vortex formation in HeII is found for  $v_{\rm S}>60$  cm/sec, dropping sharply to unobservable of the order of  $e^{-1000}$  for speeds near 40 cm/sec. The magnitude of  $j_R$  varies that with temperature, due to variation in  $v_{\rm S}$  at T>1.40K. "The author expresses gratitude to N. N. Bogolyubov for discussion of and interest in the work, and also to L. F. Pitayevskiy, for valuable discussions." Orig. art. has: 34

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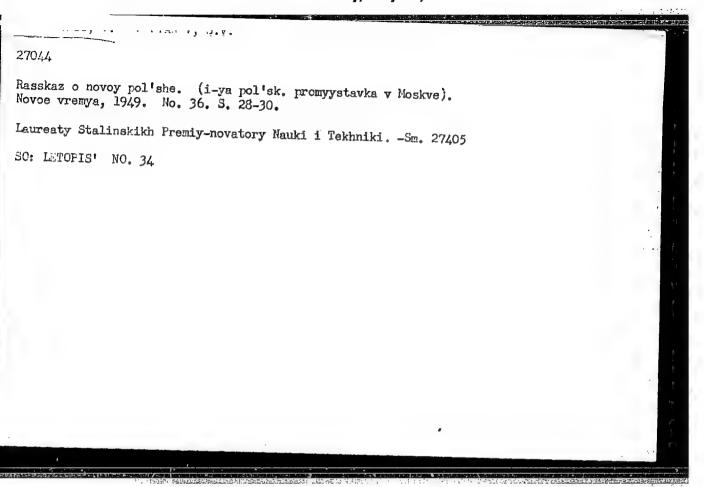
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ENT(1)/ENT(m)/ENP(w)/T/ENP(t)/ENP(b) I 2195-66 UR/0056/65/049/001/0225/0236 ACCESSION NR: AP5019236 AUTHOR: Iordanskiy, 8. V. TITLE: Mutual friction force in a rotating Bose gas Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 1, 1965, SOURCE: 225-236 TOPIC TAGS: phonon, friction, excitation spectrum, vortex, phonon scattering ABSTRACT: The author obtains for the mutual friction associated with the scattering of excitations by vortex filaments a general expression which is more accurate than that derived in earlier work (DAN SSSR v. 153, 74, 1963; Amm. Phys. v. 29, 335 1964). He also investigates the scattering of long-wavelength excitations (phonons) by a vortex filament within the framework of the model of a weakly nonideal Bose gas. It is shown that the phonon part of the mutual friction force contains a large transverse component, and that when the additional transverse terms are taken into account the agreement with experiment is improved for the roton part of the mutual-friction force. "The author thanks N. N. Bogolyubov for a discussion and interest in the work, and L. P. Pitayevskiy for useful discussions." Orig. art. has: 1 14,55 figure and 41 formulas. Card 1/2

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EWT(1)/EWP(m)/EWA(d)/T-2/EWA(m)-2/ETC(m)/EWA(1)L 12792-66 IJP(c) ACC NR: AP5026626 UR/0056/65/049/004/1326/1331 SOURCE CODE: 44,55 AUTHORS: Iordanskiy, S. V.; Kulikovskiy, A. G. ORG: Mathematics Institute. Academy of Sciences SSSR (Matematicheskiv institut Akademii nauk SSSR) TITLE: On the absolute stability of some plane parallel flows at high Reynolds numbers Zhurnal eksperimental noy i teoreticheskoy fiziki, v. 49. no. 4, 1965, 1326-1331 TOPIC TAGS: Reynolds number, motion stability, boundary layer stability, viscous flow, viscous fluid, magnetohydrodynamics ABSTRACT: Localized disturbances in the plane parallel flow of a viscous fluid are considered and the character of their instability is investigated. The localized disturbance is represented by a Fourier integral with respect to the wave number k and the behavior of the individual terms of the series is analyzed. It is shown that the localized disturbances attenuate in the course of time in any finite arbitrary region of the flow in question. The Reynolds numbers are assumed to be high enough so that k can be regarded as small for velocity profiles without 1/2 Card

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inflection points. Inflections to the wall, so that the region of small k. Unaving sufficiently small stable. If the Reynolds	t the instability inder these condition values of k on the numbers are such the	Interval lies ons all plane o neutral curv nat k on the n	entirely in parallel flows e are absolute eutral curve	В
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IORDANSKIY, V. N. Cand. Tech. Sci.

Dissertation: "Studying the Process of Centrifugal Casting of Thick-Walled Blanks."

Moscow Order of the Labor Red Banner Higher Technical School imeni N.E. Bauman, 14 Apr 47.

SO: Vechernyaya Moskva, Apr, 1947 (Project #17836)

V. N.

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SOV/137-59-9-19733

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 9, p 106 (USSR)

AUTHOR:

Iordanskiv, V.N.

TITLE:

Weldable Aluminum-Magnesium Alloys

PERIODICAL: V sb.: Sovrem. splavy 1 ikh term. obrabotka, Moscow, Mashgiz, 1958,

pp 308 - 313

ABSTRACT:

The author describes basic physical, mechanical and technological properties of AMg3 AMg5V and AMg6T alloys. The modules of elasticity of I and II kind are - E 7.0  $\cdot$  103 kg/mm<sup>2</sup> and C 2.7 x 103 kg/mm<sup>2</sup>; 2.65 g/cm3; heat resistance of the alloys is not high (up to 150°C), but their behavior is satisfactory at lower temperatures (up to 190°C). Vibration resistance is high: at  $5\cdot10^8$  cycles  $6\omega = 12.5$  kg/mm<sup>2</sup>;  $6\omega = 12.5$ and AMg6T alloys is good, that of AMg5V is satisfactory. Best results

Card 1/2

Weldable Aluminum-Magnesium Alloys

66956 SOV/137-59-9-19733

were obtained with Ar-arc welding. The strength coefficient of butt joints is 0.9 - 1.0, that of overlap joints is 0.65. Ductility of the weld-on metal is 12 - 15%, so that the work after welding can be subjected to burnishing and slight drawing. The alloys are well deformable in hot state. The forging temperature is for AMg3 - 480 to 450°C; AMg5V - 500 to 480°C; AMg6T - 480 to 460°C. The alloys have increased proneness to scale formation, which can be eliminated by heating the metal up to 280 - 300°C. The recrystallization temperature of the alloys is 280 - 250°C. AMg alloys and their weld joints are highly corrosion resistant and preserve their mechanical properties after

N.G.

Card 2/2

SPIRIDONOV, V.B.; SKAKOV, Yu.A.; IORDANSKIY, V.N.

Use of the method of thin metallic foils for studying the morphology of martensite. Zav.lab. 29 no.8:955-956 '63. (MIRA 16:9)
(Martensite—Metallography) (Metal foils)

## "APPROVED FOR RELEASE: Thursday, July 27, 2000

CIA-RDP86-00513R00051872

IORDANSKIY, V. N.; SKAKOV, Yu. A.; SPIRIDONOV, V. B.

"Structural changes during aging of martensite in chromium-nickel steel."

report submitted for 3rd European Regional Conf, Electron Microscopy, Prague, 26 Aug-3 Sep 64.

L 22544-65 EWT(m)/EWA(d)/T/EWP(t)/EWP(k)/EWP(b) Pf-4 MJW/JD/HW

ACCESSION NR: AP5002352 S/0126/64/018/006/0929/0930

AUTHOR: Spiridonov, V. B.; Skakov, Yu. A.; Iordanskiy, V. N.

TITLE: Morphology of martensite in Kh17N4M2D steel

SOURCE: Fizika metallov i metallovedeniye, v. 18, no. 6, 1964, 929-930

TOPIC TAGS: Kh17N4M2D steel, martensite formation, steel deformation, martensite morphology

ABSTRACT: The morphology of martensite obtained by 10-15% deformation of steel at room temperature was investigated. The martensite consisted of 1-2 micron long needles with no internal twinning; the density of dislocations was above 10<sup>11</sup> cm<sup>-2</sup>. The hexagonal 6-phase was not present. The strength of the martensite formed by deformation was similar to that of martensite obtained by cooling after tempering. Martensite by the latter method could not be really compared with martensite obtained at low temperatures due to the differences in carbon content. But comparison of the martensites formed by cold working and by deform-

Card 1/2

L 22544-65 ACCESSION NR: AP5002352

ation led to the conclusion that the morphology of martensite is determined primarily by the temperature of its formation. Orig. art. has: 1 figure and 1 table

ASSOCIATION: None

SUBMITTED: 10Dec63

ENCL: 00

SUB CODE: MM

NR REF SOV: 002

OTHER: 002

Card 2/2

L 17074-65 EWT(m)/EWA(d)/EWP(t)/EWP(b) ASD(m)-3/AFETR MJW/JD/JW

ACCESSION NR: AP4049919

\$/0020/64/159/003/0544/0547

AUTHOR: Spiridonov, V. B.; Skakov, Yu. A.; Ierdanskiy, V. N.

TITLE: Changes in the structure and properties with aging of martenaite in chromium nickel steels

SOURCE: AN SSSR. Doklady\*, v. 159, no. 3, 1964, 544-547

TOPIC TAGS: chromium nickel steel, maraging steel, martensite, subzero treatment, atraining, heat treatment, aging, property, structure

ABSTRACT: The kinetics of aging and the effect of aging on the fine structure of martensite have been investigated in three precipitation-hardenable steels:

Kh15N9Yo (15.03% Cr, 8.53% Ni, 1.40% Al); Kh16N5M3 (16.20% Cr, 4.78% Ni; 3.30% Mo); and Kh17N4M2D (16.65% Cr, 4.29% Ni; 2.25% Mo, 135% Cu). The martensite was formed by the subzerd treatment (at -70% for 2 hr), by cold working, or by annealing at 750% for 1.5 hr followed by cooling. The aging-induced change in the properties of steels of this type occurred rapidly in the initial stage and at a rate about two orders slower in the second stage. In a steel alloyed with Mo, the difference in the rate of change was still higher. The activation energy of aging which ranged from 40 to 57 kcal/g-at, depending on the steel composition and preliminary

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ACCESSION NR: AP4049919

treatment, remained constant during the entire aging process. This showed that aging is controlled by diffusion in both stages: by a "drift" of the solute atoms toward dislocations during the first stage; and by the diffusion resulting from chemical gradients in the second stage. The kinetics of aging and structural changes occurring in martensite during aging are very similar in steels alloyed with different elements. The differences in the nature of alloying elements promoting the aging and in the final structure of precitated secondary phase appear during later stages of aging. The main changes in the martensite properties appear to occur in the initial stage of aging and to be associated with the formation of segregations and coherent formations. Hence, aging of martensite is a particular case of aging when the matrix has a very high dislocation density, and strengthening takes place during the decomposition stage which precedes the formation of particles of the stable phase and which is different in different steels. Orig. art. has: 3 figures and 1 table o.

ASSOCIATION: none

SUBMITTED: 10Ju164

SUB CODE: MM. IE

NO REF SOV:

OTHER:

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2/2

3. 19478-05 ENT(m)/ELA(d)/T/ENP(t)/ENP(b) ASD(m)-3 MJW/JD

\*CESSION NR: AP4047511 S/0129/64/000/010/0049/0051

AUTHOR: Spiridonov, V. B.; Skakov, Yu. A.; Iordanskiy, V. N.

TITLE: Microstructure of martensite in chromium-nickel steel

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 10, 1964, 49-51

TOPIC TAGS: chromium nickel steel, Kh17N4M2D steel, austenitic martensitic steel, precipitation hardenable steel, steel martensite, martensite structure, martensite strength / g

ABSTRACT: The structure of martensite in Kh17N4M2D precipitation-hardshable steel (0.09%C, 16.65% Cr. 4.29% Ni, 2.25% Mo, 1.34% Cu) has been studied with a transmission electron microscope. It was found that the structure of martensite depends upon the conditions of formation. Subzero treatment at -70C for 2 hr transformed 80—85% of the masterite into martensite consisting of a mixture of needles and lamelios with twin crystals 100—2000 Å wide. In wider twins, some discocations were observed. Needles contained no twins, but a consideration number of dislocations. High tempering at 750C for 1.5 hr and

Card 1/2

L 19478-65

ACCESSION NR: APhoh7511

the austenite into acicular martensite without twins but with a significant number of dislocations. The tensile and yield strengths of martensite obtained by subzero treatment were 140-150 kg/mm² and 100 kg/mm². Those of martensite obtained by tempering were lower: 15-110 kg/mm² and 80 kg/mm². Individual crystals of martensite poserved in residual austenite containing stacking faults confirmed the assumption about the nucleation action of stacking faults which otherwise appear to limit the growth of martensite crystals. Orig. art. has: 3 figures.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of Steel and Alloys)

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF SOV: 002

OTHER: 003

ATD PRESS: 3159

Card 2/2

L 15025-65 EWT(m)/EVA(d)/EMP(t)/TMP(b) ASD(m)-3/AFETR JD ACCESSION NR: AP4049106 S/0129/64/000/011/0019/0024

AUTHOR: Spiridonov, V. B.; Skakov, Yu. A.; Iordanskiy, V. N.

TITLE: Changes with aging in the properties of martensite of chromium-nickel steels

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 11, 1964, 19-24

TOPIC TAGS: chromium nickel steel, cold treatment, straining, heat treatment, martensite, aging

ABSTRACT: The dependence of the aging effect on the structure of martensite, i.e., on the method of obtaining martensite, in stainless, austenitic-ferritic, Cr-Ni steels has been investigated. In four semiaustanitic stainless steels containing 0.07—0.09% C,15.03—16.65% Cr, and 4.29—9.53% Ni alloyed with Al, Mo, Mo and Cu, or Mo and Al, martensite was formed by subzero treatment at -70C for 2 hr, by cold rolling with a 15—17% reduction, or by cooling after tempering for 1.5 hr at 750C. Changes in the mechanical properties and electrical resistivity were studied in the steels aged for up to 3 hr at temperatures ranging from 400 to 550C. Rapid and slow stages in the changes caused by aging in the properties of Cr-Ni steels with a martensitic structure were observed. The two stages were particularly noticeable in steels alloyed with Cu or Al. In steels alloyed with Mo, the main change in

Card 1/2

### "APPROVED FOR RELEASE: Thursday, July 27, 2000

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ACCESSION NR: AP4049106

properties occured in the first minutes of aging. In both stages, aging is determined by diffusion. In the first stage of aging, the diffusion consists mainly in a "drift" of dissolved atoms toward dislocations under the action of the stress field, while in the second stage, a normal diffusion caused by chemical gradients takes place. The strengthening with aging probably occurs in the initial stage of martensite decomposition when the dislocations are pinned. The nature and concentration of the structure defects affect the kinetics of strengthening and weakening with aging. The structure defects of martensite formed by cold treatment are more stable than the defects of martensite formed by straining or heat treatment. As a result, cold-treated steels get higher mechanical properties with aging, and are less susceptible to weakening with overaging than the steels with a martensitic structure formed by straining or heat treatment. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REP SOV: 007

OTHER: 001

ATD PRESS: 3143

Card - 2/2

# "APPROVED FOR RELEASE: Thursday, July 27, 2000 CIA-RDP86-00513R00051872

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FWT(m)/FWP(w)/EWA(d)/EPR/T/EWP(t)/EWP(k)/EWP(z)/EWP	(b)/EMA(c) Pf-4/Ps-4	
S/0129	/55/000/003/0047/0049	
		Č
: iridonov, V. B.; Skakov, Yu. A.; lordanskiy, V. M.		
TITLE: Electron microscopic study of Kh21N5T steel		
SCURCE: Metallovedeniye i termicheskaya obrabotka metallov,	no. 3, 1965, 47-49	
SOURCE: Metallovedeniye i termiconosusyo	property, heat treat-	
TOPIC TAGS: brittleness, steel hardening, metal mechanical	14	
ment, metal roll	maganic study of	
ASSTRACT: The authors report the results of an electron mic Kh21N5T steel foil subjected to heat treatment used for mass Kh21N5T steel foil subjected to heat treatment used for mass	ive samples. Mechanical	
Who INAT steel foll subjected to most	1050°C 3U-min	
aging cooling in water, and alter	n aveces of amounts	
rendency toward embrittlement in the property of the state of the stat	+ after tempering at	
about 500°C is due to separation production	sing tamperatures	
about 500°C is due to separation processes. The tendency to location-type defects is particularly noticeable at higher (600°C for 8 hr, cooling in air). Diffraction patterns of	the same character were	
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# "APPROVED FOR RELEASE: Thursday, July 27, 2000 CIA-RDP86-00513R00051872

ACCESSION NR: AP5007008		<u>3</u> with the control was a second of the control of the	
obtained at 550 and 600°C tion of the segregations revent the embrittlement	and an accompanying increas	cassary to restrict the content	
ASSOCIATION: none	1		
SUBMITTED: 00	ENCL: 00	SUB CODE: MM	
N ACE SOV- 901	OTHER: 000		:

04199-57 EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JD/WW/JG/WB ACC NR: AP6028582 SOURCE CODE: UR/0129/66/000/008/0006/0011 AUTHOR: Spiridonov, V. B.; Vlasova, T. A.; Iordanskiy, V. N. ORG: none 2727 27 TITLE: An electron-microscopic study of the Al-Zn-Mg alloy system. [Delivered at the Seminar on Advanced Technology for Heat Treatment of Light Alloys, Leningrad, December 1963] SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 8, 1966, 6-11 TOPIC TAGS: aluminum alloy, zinc, magnesium, heat treatment, precipitation hardening, electron microscopy, phase structure, crystal lattice parameter, mechanical property, stress corrosion, grain boundary stability ABSTRACT: An electron-microscopic study was made of the Al-Zn-Mg alloy system. Fifteen alloys were used having the following composition ranges: 3.25-4.90% Zn, 1.30--4.32% Mg, trace--0.65% Mn, trace--0.22% Fe, trace--0.10% Si, trace--0.12% Cr, trace----0.22% Zr, trace--0.05% Cu, and trace--0.17% Ag. Foils of 0.10-0.15 mm thickness were quenched in air or water from 450°C and aged at 20-275°C. The aging mechanism of the alloys were related to stress corrosion behavior. Electron micrographs of ATSM and V92 alloys showed G-P zones 30-50 A in diameter after room temperature aging. Aging at 100°C for 100 hr (maximum strength condition) resulted in MgZn2 formation on UDC: 669.15'72:620.187 **Card 1/3** 

L 04199-67

0 1 7/3

ACC NR: AP6028582

{111} matrix planes. Strain fields due to coherency were observed around the MgZn2 particles after aging at 130-140°C, while higher aging temperatures merely changed the dimensions of the MgZn<sub>2</sub> particles. At 200-250°C, Al<sub>2</sub>Mg<sub>3</sub>Zn<sub>3</sub> (T-phase) precipitated. Lattice parameters and plane spacings for the precipitates and mechanical properties for different aging Conditions are presented. The relation between grain boundary & precipitation and stress corrosion was established for these alloys. After quenching from 450°C and aging to different conditions, the relative amount of both grain boundary and adjacent boundary zone precipitation Was obtained. Zones adjacent to grain boundaries were relatively free of precipitation and widened as a function of aging temperature, corresponding to an increase in grain boundary precipitation. Particle dimensions were 1500-2500 Å on grain boundaries, 1000-2000 Å on adjacent zones, and 250-400 Å within grains. Manganese and chromium did not affect the size or distribution of precipitates, although they improved the stress corrosion properties. The addition of 0.16-0.22% Zr resulted in a more uniform distribution and finer gize of precipitate; the particle dize did not exceed 250 Å Titanium and scandium had the same effect as zirconium. The greatest structural changes were caused by copper and silver additions; particle size did not exceed 150 Å and the precipitate-free zone diminished to a width of 400-500 Å. Explanations based on increased vacancy concentrations as a result of alloying are presented. Two methods are recommended for decreasing the stress corrosion tendencies of these alloys: 1) decreasing the vacancy concentration before aging by lowering the cooling rate during quenching; or raising the

# "APPROVED FOR RELEASE: Thursday, July 27, 2000

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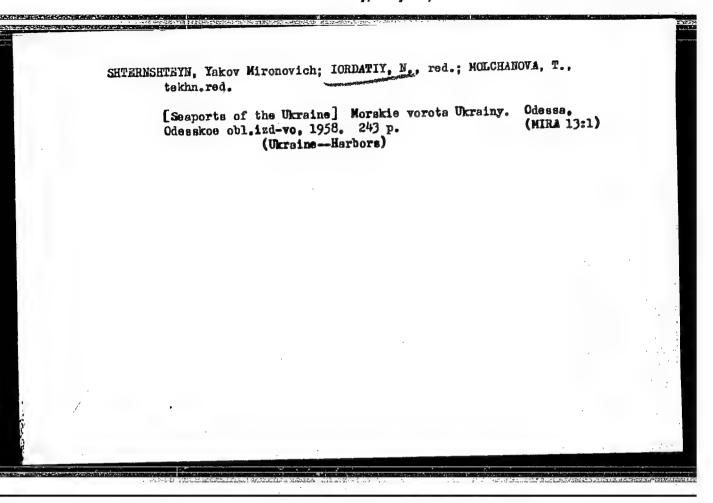
aging temperature but necessarily adding Cr, Mn, Fe, Si, Ti, or Zr; 2) raising the vacancy concentration for a more disperse and uniform structure by adding Zr, Ti, Sc, Cu, or Ag to increase the vacancy solubility. Orig. art. has: 5 figures, 5 tables.					
DE: 11,20/ SUBM DATE: DO	one/ ORIG REF:	005/ OTH REF:	006		
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IORDANSKIY, Ye. N.

"The Duration of Muscular Tension and Its Dependence on the Manner of Irritation." Sub 13 Nov 51, Acad Med Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum, No. 480, 9 May 55.



SHODKHIN, Wadimir Sholomovich; IORDATIY, N., red.; MOLCHANOVA, T., tekhn. red.

[Economics seminar in a plant] Ekonomicheskii seminar na zavode. Odessa, Odesskoe oblastnoe izd-vo, 1958. 19 p. (MIRA 15:6)

1. Rukovoditel' seminara po izucheniyu konkretnoy ekonomiki na Odesskom staleprovolochno-kanatnom zavode (for Shodkhin).

(Odessa—Iron and steel workers—Education and training)

(Industrial management—Study and teaching)

PANKRAT'IEV, Ivan Matveyevich; IORDATIY, N., red.; MOLCHANOVA, R., tekhn. red.

[How we conduct economic conferences] Kak my provodim ekonomicheskie konferentsii. Odessa, Odesskoe oblastnoe izd-vo, 1958. 21 p. (MIRA 15:6)

1. Sekretar' Kiliyskogo raykoma Kommunisticheskoy partii Ukrainy, predsedatel' rayonnogo ekonomicheskogo soveta (for Pankrat'yev).

(Kiliya District—Fara magement—Congresses)

### "APPROVED FOR RELEASE: Thursday, July 27, 2000 CIA-RDP86-00513R00051872

LINDOVICH Yugoslevia College to College ted Flants. Fruite. Berries. Nats. Tea. ... S. 10UK.: Ref Zimr -Biologiya, No. 5 , 1959, No. 20 466 artuor Iordovich 1 ..... CHILS Cultivating Plum Saplings Uninfected with Virus Diseases. Poljoprivreda, 1957, 5, No.1, 59-64 ORTG. PUBL ABSTANCT: A method of selecting maternal plum trees which are not infected by virus mosaic is recommended to guarantee the Yugoslavian nurseries with bealthy cuttings. CARD : 1/1

### "APPROVED FOR RELEASE: Thursday, July 27, 2000 CIA-RDP86-00513R00051872

Synthesis of c-phthalodinitrile through the catalytic condensation of phthalic anhydride with amendia in vapor phase. Studii chim Timisoara 7 no.3/4:317-319 J1-D '60. (ERAI 10:9/10)

(Phthalonitrile) (Catalysis) (Phthalic anhydride)

(Ammonia)

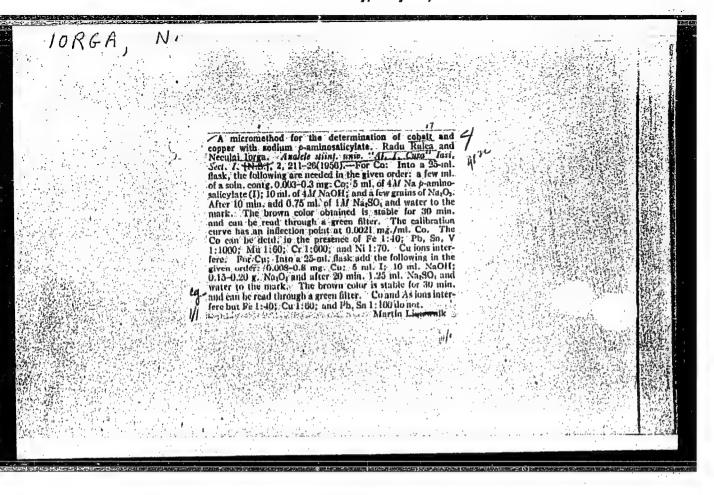
PHAT, L.: IORGA, M.: MOSCOVIGI, B.

Clinical aspects of mercury poisoning. Med. int., Bucur. 10 no.4:
621-627 Apr 58.

1. Institutul de Igiena munci si boli profesionale R.P.R.
(MERCURY, poisoning
 subcutte, by mercury vapors, clin. aspects, case reports & ther.)
(DDGERGAPROL, ther. use
 mercury pois., case reports)
(ETATHAMIL, ther. use
 mercury pois., case reports)

### "APPROVED FOR RELEASE: Thursday, July 27, 2000

CIA-RDP86-00513R00051872



PONI, Margareta; IORGA, N.; BOSTAN, Marcel

Thermogravimetric and X-ray diffraction study of some 5-nitrobarbituric acid complexes. Studii chim Iasi 14 no.1: 19-32 '63.

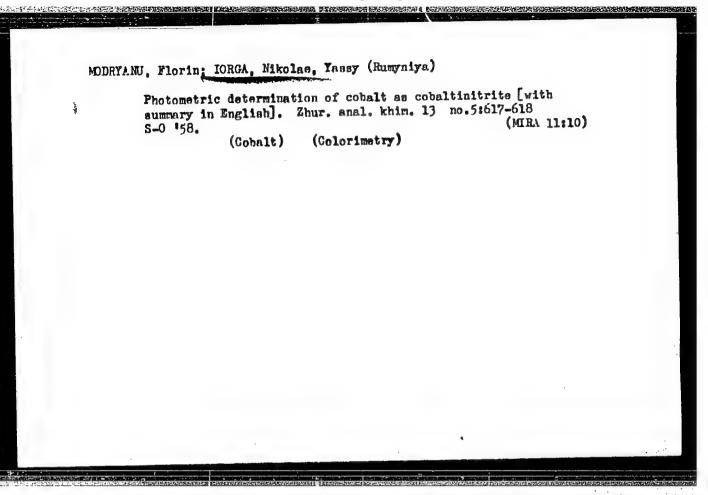
1. Filiala Iasi a Academiei R.P.R., Institutul de chimie "P.Poni", sectia de chimia combinatiilor coordinative.

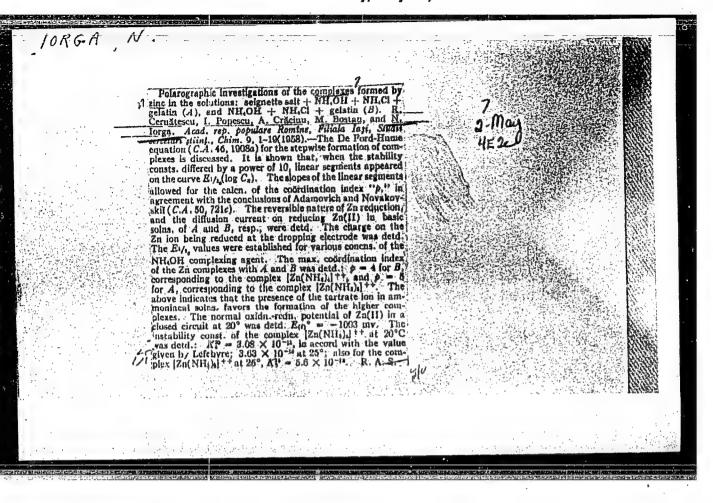
IDRICEANU, T.; IORGA, N.; ERHAN, V.

Mineralogical research on some Sarmatian clays in the Moldavian Plateau. Pt. 2. Studii chim Iasi 14 no.1:103-111 '63.

1. Universitatea "Al. I. Cuza" Laboratorul de Mineralogie.

### "APPROVED FOR RELEASE: Thursday, July 27, 2000 CIA-RDP86-00513R00051872





# Complex salts of the higher fatty acids (VIII): chromatographic study of the lauric acids of Co<sup>2</sup>, Wi <sup>2</sup> and Cu <sup>2</sup>. Studii chemie Iasi 10 no.2:185-194 \*59. (EEAI 10:1) 1. Academia Republicii Populare Romine, Filiala Iasi; Institutul de Chimie \*Petru Poni.\* Universitatea \*Alex. I. Cuza\* Iasi, Catedra de Chimie anorganica. (Salts) (Zinc) (Cobalt) (Nickel) (Copper) (Patty acids) (Chromatography) (Lauric acid) (Cadmium) (Mercury) (Cations)

### "APPROVED FOR RELEASE: Thursday, July 27, 2000 CIA-RDP86-00513R00051872

PONI, Margareta P.; BOETAN, Marcel; IORGA, Nicolae; GERE, Iulian

Salt complexes with 5-mitrobarbituric acid. Rev chimie Roum 9 no.10:575-584 0 '64.

1. "Potru Poni" Institute of Chemistry of the Remanian Academy, Easi Branch, 41 & Alcea Grigore Chica Voda.

PONI, Margareto P.; EOSTAN, Marcel; IORGA, Nicolae; GABE, Iulian

Complex salts of the 5-nitrobarbituric acid. Pt.2. Studii
cerc chim 13 no.10:619-628 0 '64.

1. "Petru Poni" Institute of Chemistry, Rumanian Academy,
Iaei Branch, 41 A Aleea Grigore Ghica Voda.

BULGARIA/Form Animals. Horses

Q-2

Abs Jour : Ref Zhur - Biol., No 11, 1958, No 49972

Author : Popov, V., Peliyov, Kh., Iorgov I.

Inst : Ministry of Agriculture

Title : Substituting & Fart of Concentrated Foods and Hay by Corn

Siloge in the Diet of Colts.

Orig Pub : Neuchn. tr. M-vo zoned. i gorite, Sr. zhinotnovodstvo i vet.

dolo, 1957, 2, No 1, 1-14

Abstract: In the diet of 12-2 year old colts of the draft broad, 1 kg

of concentrate and 2 kg of hey were substituted by 10-12 kg of corn silege. Also, in the dictof weened feels, 0.4-0.8 kg of orts and 1 kg of hey were substituted by 5-7 kg of

silege. The resulting weight gains were higher than the

weight gains in control animals.

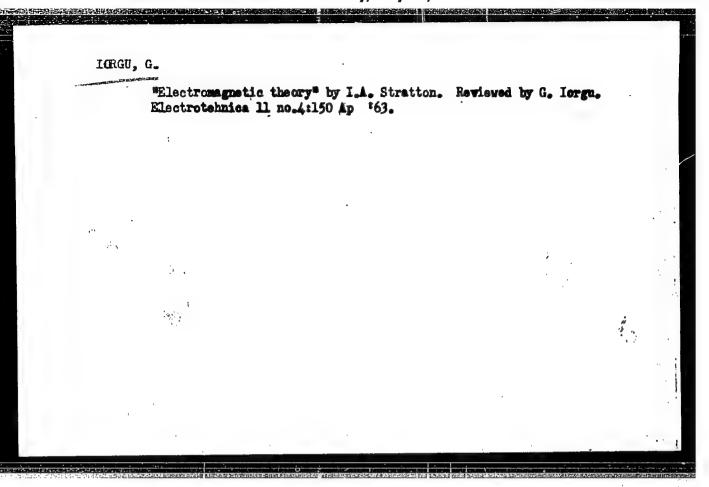
Card : 1/1

IORGOV. V.

5.011 kg. of milk per cow. p. 17. (coperativno Zemedelie Vol. 10, no. 8, Aug. 1955, Sofiya)

SO: Wonthly List of Mast Maropean Accessions, (MMAL). LC. Vol. 4, No. 11, Nov. 1955, Uncl.

## "APPROVED FOR RELEASE: Thursday, July 27, 2000 CIA-RDP86-00513R00051872



IORGU, Nikula. Cand Tech Sci -- (diss) "Experimental studies in the field of perplication of nemmetal reinforcement for concrete." Mos, 1959. 18 pp including cover (Min of Higher and Secondary Specialized Education USSR.

-Mos Order of Labor Red Banner Construction Engineering Inst im V. V. Kuybyshev), 200 copies (KL, 49-59, 140)

-41-

Determining the radon atmospheric concentration through the measurment of catabatic solids by filtration tests. Studit cerc fiz 11 no.1: 232-235 \*60. (ERAI 10:1)

(Radon) (Radioactive fallout) (Filters and filtration)

ONCESCU, M.; IORGULESCU A.

Organism irradiation due to atmospheric fallout. Studii cerc fiz 14 no.6:769-773 '63.

1. Institutul de fizica atomica, Bucuresti.

IORGULESCU, Florin, conf. ing. (Bucuresti); DIACON, Alexandru, conf. (Bucuresti)

Considerations on the use of the Rumanian water power resources during the 1961-1980 period. Energetica Rum 10 no. 11:457-463 N  $^{1}62$ .

- 1. Director tehnic al Institutului de studii si proiectarii energetice (for Iorgulescu).
- 2. Inginer specialist la Institutul de studii si proiectari energetice (for Diacon).

BUTESCU, E. dr.: TORGULESCU, M., dr.; CALOTA, St., dr.; TATARU, N., dr.; CIOBANU, I., dr.; CUMPANAS, M., dr.; CANCIOVIC., M., dr.

Clinical aspects of poisoning with insecticides and fungicides and our therapeutic experiences. Microbiologia (Bucur) 9 no.5: 453-456 S-0 '64

1. Lucrare efectuata in Spitalul nr.3, Craiova.

RUMANIA

616.981.551:618.39

BUTTESCU, E., Dr. IORGULESCU, M., Dr. TATARU, N., Dr. CIÓBANU, I., Dr., and CALOTA, Stefania, Dr. Work performed at the Hospital No 3 (Spitalul Nr 3), Craiova.

"Clinical and Epidemiological Considerations in 45 Cases of Uterine Tetanus."

Bucharest, Microbiologia, Parazitologia, Epidemiologia, Vol 11, No 3, May-Jun 66, pp 269-272.

Abstract [Authors' English summary modified]: After a review of the data in Rumanian and world literature regarding uterine tetanus, the authors discuss 45 cases of the infection seen at the Department for Infectious Diseases of the Craiova Hospital. Attention is called to the great diversity of forms which may occur and to the severity of the disease, which showed a death rate of 84.6 percent. While timely serum therapy and curettage gave the highest recovery rate of the treatments tried, the authors stress that the only effective prophylaxis consists of specific prophylactic measures coupled with a general rise of educational and sanitary standards.

Includes 10 references, of which 2 Rumanian, 2 Englishlanguage and 6 French-language. -- Manuscript submitted 1 October

1964.

1/1

MILKU, Sh.M. [Milcu,S.A.]; ANDZHELESKU, Ye. [Angelescu, E]; DAMIAN, A.

[DAMIAN, A.]; STOYENESKU,D. [Stoenescu, D.]; OPRAN, Kh.[Opran,H.]

OPROTU, A. [Oproiu,A.]; IORCULESKI, G. [Iorgulescu, G].

Virilizing malignant tumor of the adrenal gland. 14a Probl.endok.

i gorm 8 no.2298-103 Mr-Ap\*62.

(ADRENAL GLAND—CANCER) (VIRILISM)

GROSZ, I., ing.; IORGUIE SCU. Gr., ing.

Crack defectoscopy by fluorescence. Energetica Rum 9 no.9: 381-384 S '61.

1. Intreprinderea pentru rationalizari si modernizari energetice (for Grosz). 2. I.E.C. Bucuresti (for Iorgulescu).

### RUMANIA

BUTTESCU, E., Dr., IORGULESCU, M., Dr., and TATARU, N., Dr. Work performed at Hospital No 3 (Spitalul Nr 3), Craiova.

"Staphylococcal Scarlet Fever."

Bucharest, Microbiologia, Parazitologia, Epidemiologia, Vol 8, No 5, Sep-Oct 63, pp 433-436.

Abstract [Authors' English summary modified]: A report on four cases of the disease treated at the Craiova Hospital for Contagious Diseases. Clinical aspects are described, as are the positive laboratory tests that confirmed the diagnoses. It is pointed out that staphylococcal infections are on the increase. Includes 2 English-language and 3 Rumanian references.

1/1

2

BUTTESCU, E., dr.; IORGULESCU, M., dr.; TATARU, N., dr.

Staphylococcal scarlatina. Microbiologia (Bucur) 8 no.5%433436 S-0\*63.

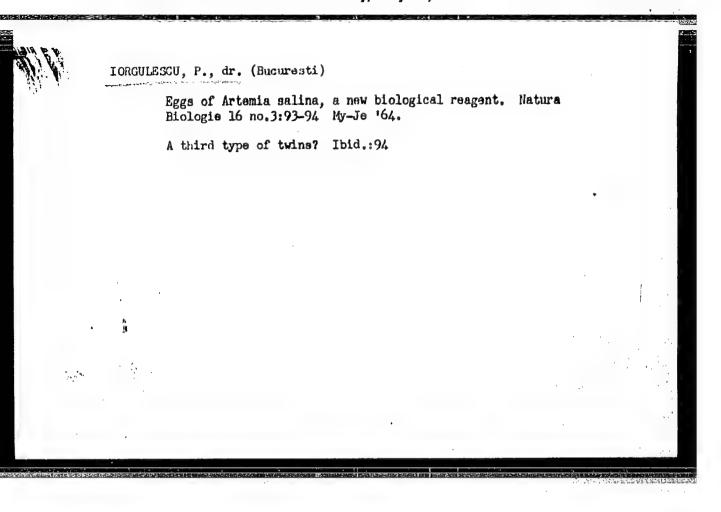
1. Lucrare efectuata in Spitalul nr.3, Craiova.

IORGULESCU, P.

Sterility in animals. p. 71. NATURA. Bucuresti. Vol. 7, no. 3, May/June 1955.

SOURCE:

East European Accessions List (EEAL) Library of Congress Vol. 5, No. ?, July 1956.



BALLY, D.; BENES, L.; ILIESCU, N.; IORGULESCU, St.; OLTEANU, I.

Characteristics of a universal X-ray tube. Studii cerc fiz 12 no.2:461-467 '61.

1. Institutul de fizica atomica Bucuresti.

(X-ray tubes)

BALLY, D.; BENES, L.; ILIESCU, N.; IORGULESCU, St.

The absorption spectrum K of the elements such as zinc, arsenic, selenium sirconium, and molybdenum, irradiated with neutrons.

Studii cerc fiz 13 no.3:443-448 '62.

1. Institutul de fizica stomica, Bucuresti.

BENES, L.; ILIESCU, N.; ICROULESCU, St.; OLTEANU, I.

X-ray spectrometer with a 2m arm. Studii cerc fiz 14 no.1:73-78 163.

1. Institutul de fizica atomica Bucuresti.

# IORGULESCU, St.

Problems and prospects of X-ray microscopy. Studii cere fiz 14 no.51647-670  $^{\circ}63.$ 

1. Institutul de fizica atomica, Bucuresti.

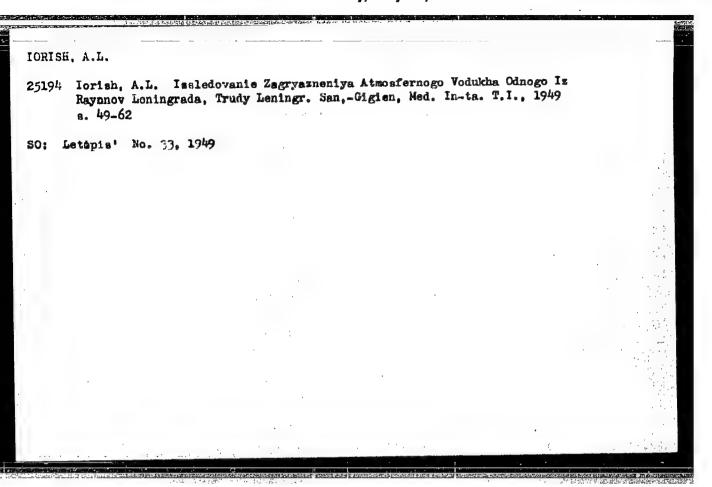
IORGULESCU, Th., and others

Geologic and micro-paleontologic considerations on some salt deposits of Rumania. P 127

REVISTA MINELOR. (Ministerul Minelor, Ministerur Industriei Petrolului si Chimiei, Directia Exploatarilor Miniere si Asociatia Stinitifica a Inginerilor si Tehnicienilor din Rominia) Bucuresti, Rumania. Vol. 10, no. 4, Apr. 1959.

Monthly List of East European Accessions (EEAI) LC. Vol. 8, no. 9, Sept. 1959.

Uncl.



TOKTSH, A. I.

AID P - 3645

Subject

: USSR/Medicine

Card 1/1

Pub. 37 - 9/18

Author

: Iorish, A. L., Kand. Med. Sci.

Title

: Some data on eye contamination in the streets

Periodical: Gig. i. san., 10, 40, 0 1955

Abstract

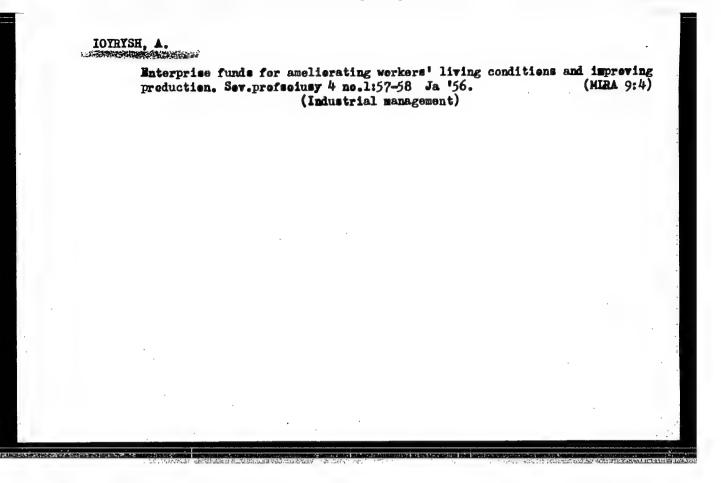
: Deals with air conditions in the vicinity of electric power plants or railroads, and recommends the installation in the streets of cinder-catching devices to prevent cases of eye contamination by coal, cinder or dust particles.

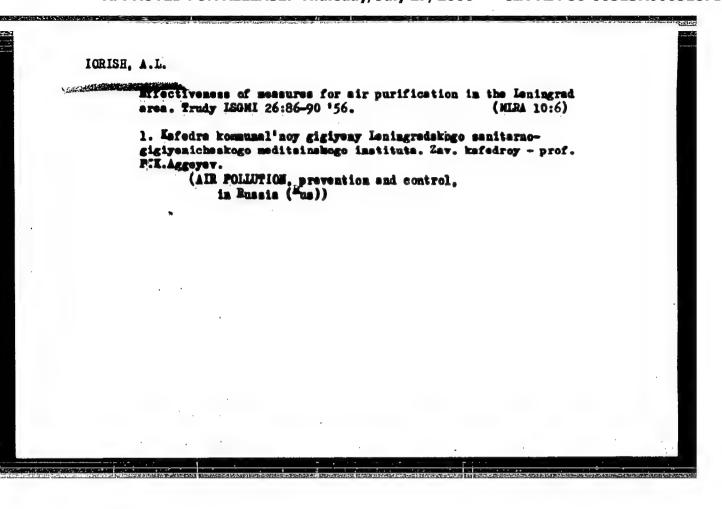
Table.

Institution: Leningrad Medical Institute of Sanitation and Hygiene

Submitted

: Ap 19, 1955





# Coular traums suffered on the streets as an index of air pollution. Trudy LEGMI 26:9k-96 \*56. 1. Kafedra kommunal'noy gigiyany Leningradskogo sanitarno-gigiyanicheskogo meditanakogo instituta. Zav. kafedroy - prof. F.K.Aggeyev. (AIR POLLUTION, causing eye inj. (Rus)) (BYB, wounds and injuries, caused by air pollution (Rus))

IORISH, Aleksandr Yevgen'yevich; KATSMAN, Yakov Abramovich; PTITSYN,
Sergey Vladimirovich; OBOLENSKIY, S.A., red.; ZHITNIKOVA,
O.S., tekim. red.

[Ptinciples of the mamufacturing technology of electric vacuum devices] Osnovy tekhnologii proizvodstva elektrovakuumnykh priborov. Moskva, Gos. energ. izd-vo, 1961. 515 p.

(Electron tubes)

(Electron tubes)

S/109/63/008/002/010/028 D413/D308

AUTHORS: Iorish, A.Ye., Krasin kova, M.V., Moyzhes, B.Ya.,

and Sorokin, O.V.

TITLE: The thermal emf, electric conductance and resistance

variation in a magnetic field of barium-strontium

oxide

PERIODICAL: Radiotekhnika i elektronika, v. 8, no. 2, 1963,

269-278

TEXT: Although a number of papers have dealt with measurements of thermal emf,  $\Delta \rho/\rho$  in a magnetic field, and electrical conductance of cathode oxide coatings, these data have been considered in isolation. Here they are all examined together in the light of the accepted theory that conduction in oxide coatings occurs through the pores, which are filled with electron gas by thermionic emission from their walls. First a theoretical treatment is given for the values of thermal emf, conductance and  $\Delta \rho/\rho$  for the electron gas in the pores, and then experimental results for barium-strontium oxide

Card 1/2

	S/109/63/008/002/010/028 D413/D308  The thermal emf,  are presented and discussed. The linear relation of AP/P to H in weak magnetic fields is explained: the work function relative to the bottom of the conduction zone is evaluated: the dimensions of the pores for maximum conductance are calculated with allowance for the space-charge in the pores. There are 8 figures.					
	SUBMITTED:	April 26, 1962				
	Card 2/2					
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ACCASSION NR: AP4017600

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AUTHOR: Dubova, T. A.; Iorish, A. Ye.; Krasin'kova, M. V.; Moyzhes, B. Ya.; Petrov, I. N.; Sorokin, O. V.; Chudnovskiy, F. A.

TITLE: Electrical conductivity and thermo-emf of a barium-strontium oxide in a magnetic field

SOURCE: Radiotekhnika i elektronika, v. 9, no. 2, 1964, 300-307

TOPIC TAGS: electrical conductivity, thermo emf, oxide coated cathode, barium strontium oxide, barium strontium oxide thermo emf, barium strontium oxide conductivity

ABSTRACT: Measurements were taken of factory specimens of Ba-Sr oxide, 100-200-microns thick, placed between two cylindrical nickel bases (see Enclosure 1) and subjected to a transverse magnetic field. One of the tubes was equipped with a ring anode and served to measure the thermo-emission from the

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# ACCESSION NR: AP4017600

side surface of the oxide. The effect of temperature and the magnetic field on the resistivity and thermo-emf of the Ba-Sr oxide was investigated. Estimated from experimental results, the free-path length of an electron in the cathode pores is 4-30 microns and the electron mobility is from 3.5×10<sup>4</sup> to 2×10<sup>5</sup> cm<sup>2</sup>/v sec for the various specimens. The thermodynamic work function, electron concentration, and conductivity are also estimated. It is inferred that the pores in the oxide cathode must be open and intercommunicating and, therefore, that under total thermionic-current conditions, the electrons must be emitted by the entire near-surface layer of the oxide; this fact may, in part, explain the abnormally high Schottky effect in oxide cathodes. Orig. art. has: 7 figures, 13 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 30Dec62

DATE ACQ: 18Mar64

ENGL: 01

SUB CODE: GE

NO REF SOV: 001

OTHER: 003

Card 2/3

ACCESSION NR: AP4043679

\$/0109/64/009/008/1447/1457

AUTHOR: Jorish. A. Ye.; Moyzhes, B. Ya.; Sorokin, O. V.;

Chudnovskiy, F. A.

TITLE: Temperature distribution in a cathode oxide coating

SOURCE: Radiotekhnika i elektronika, v. 9, no. 8, 1964, 1447-1457

TOPIC TAGS: oxide cathode, electron tube, electron tube cathode,

(BaSr Ca) CO3 cathode, (BaSr) CO3 cathode

ABSTRACT: The theoretical and experimental investigation of the temperature distribution in an oxide-coated cathode is reported. The theoretical part differs from the well-known work of H. C. Hamaker (Philips Res. Repts., 1947, 2, 55-67, 103-111, 112-125) in that the temperature drop in the oxide is not assumed small, and an allowance is made for the Joule heat in the oxide, for the refractive index of the oxide, and for the radiation reflected by the anode. The experimental part includes measuring the thermal conductivity (10<sup>-5</sup>--3x10<sup>-6</sup> w/cm-degree) of oxide-coating grains at temperatures ranging from room temperature

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ACCESSION NR: AP4043679

down to liquid-nitrogen temperature. It is estimated that the temperature of the oxide may be higher than that of the cathode base by hundreds of degrees when heavy emission currents are involved; a still higher difference is possible under pulsed operating conditions of the tube. The anode reflection has an essential pulsed on the temperature distribution. Hot spots on the cathode due to low effect on the temperature distribution. Hot spots on the cathode due to low thermal conductivity at heavy emission or due to an insufficient rate of heat removal from an underheated cathode may result in sparking; a formula giving a criterion of the cathode thermal instability is offered. The heat radiation capacity of a Ni-base oxide cathode was measured; the radiation dissipation factor, which corresponds to a photon free-path length of 30-50 microns at 800-900C, is estimated. Orig. art. has: 5 figures, 31 formulas, and 2 tables.

ASSOCIATION: none

SUBMITTED: 15Jun63

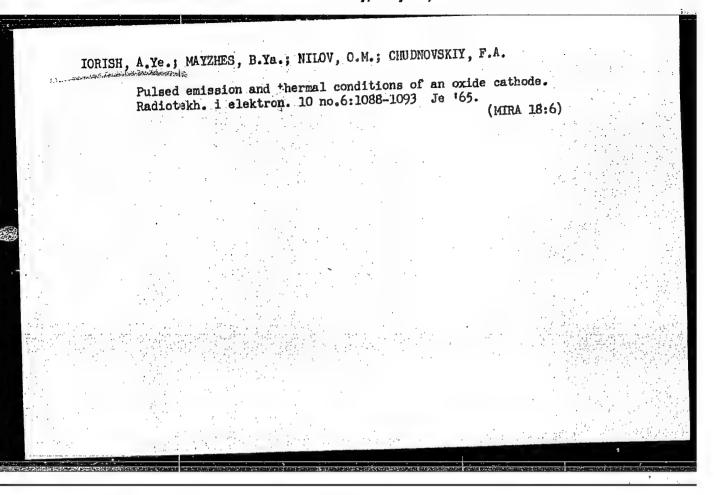
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Card 2/2



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ACCESSION NR: AP5015811

UR/0109/65/010/006/1098/1093 621.385.735

AUThOR: Iorish, A. Ye; Moyzhes, B. Ya.; Nilov, O. M.; Chudnovskiy, F. A.

TITLE: Pulse emission and thermal conditions of the oxide-coated cathode

SOURCE: Radiotekhnika i elektronika, v. 10, no. 6, 1965, 1039-1093

TOPIC TAGS: oxide coated cathode

ABSTRACT: Pulse current-voltage characteristics of the triode section of a GF1P oxide-cathods tube were measured; 5-pc sec pulses singly and at repetition rates of 50, 100, 300, and 100 cps were applied. It was found that, with single pulses, the characteristics are close to the normal Schottky law; thus, the hypotheses explaining the high pulse emission by curving the zones at the surface, by secondary emission, and by surface inhomogeneity have been disproved. The emission monotonously increased with the repetition rate. This can be explained by the heating up of the oxide surface if the very little total conduction of the oxide coating is taken into account. It was also found that the cathode heat exchange through radiation is comparable to that allowed, thermal conduction. Orig. art. has: 3 figures, 6 formulas, and 2 tables.

Card 1/2

ACCESSION NR: AP5015811 ASSOCIATION: none		0	
SUBMITTED: 29Dec63	ENCL: 00	SUB CODE: E	
NO REF SOV: 006	OTHER: 004		

TORISH, L. S.

"Some Facts About the Condition of the Blood Circulation in Hypertonic Disease." Sub 26 Mar 51, Second Moscow State Medical Inst imeni I. V. Stalin.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

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FOGEL'SON, L. I.; IORISH. L. S.		· · · · · · · · · · · · · · · · · · ·	
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9. Monthly List of Russian Accessions,		an Arrest 7	_1953, Uncl.

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TORISH, N.P.

SHTANCHAYEV, S.Ts., pomoshchnik epidemiologa (Kokchetav)

"Therapeutic qualities of honey and bee venom." H.P. Iorish. Reviewed by S.Ts. Shtanchaev. Fel'd.i akush. no.5:62-63 70 355.

(ICRISH, H.P.)
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